

Tab J. "Converting data relating to a selected matching item and an associated source to data relating to an item and a different source"

Claims using this term: claims 3, 6, and 28 of '683 patent

Lawson remaining terms and phrases 2

<u>Lawson's Proposed Definition</u>	<u>Lawson's Proposed Definition</u>
<p>A process of substituting data relating to a selected matching item and an associated source for data relating to an item and a different source</p> <p>Lawson agreed at the <i>Markman</i> hearing to use ePlus's proposed definition if the term "cross-referencing" was replaced by "substituting."</p>	<p>"The first two messages of the message screen of Appendix X indicate that a part number for line 001, identified as part number 53610, was successfully added in substitution for a prior part originally entered as part number S100-06 (from the Fisher Scientific catalog). These messages were generated because the originally entered part (S100-06) did not exist in the Fisher catalog, but its corresponding part number S100-06 (that was located by another search in another catalog) did exist in that other catalog. The next message indicates that the vendor for part number 53610 was changed in line 001 from "VN00000001"- meaning that the originally requested vendor (Fisher) was changed." ('683 patent, Detailed Description of the Invention, 16:19-30 (emphasis added))</p>

APPENDIX X

*** REQUISITION MANAGEMENT SCREEN ***

ACCT NBR: 218848 002 REQ NBR: TEST NEW ONE
COMP: 001 REL NBR:
ELECTRONIC SOURCING MESSAGES
LINE NUMBER 001 PART NUMBER 53610
PART ADDED SUCCESSFULLY
LINE NUMBER 001 PART NUMBER 53610
REPLACEMENT WAS MADE FOR PRIOR PART: S100-06
LINE NUMBER 001 PART NUMBER 53610
VENDOR CHANGED FROM: VN000000001
LINE NUMBER 002 PART NUMBER 53620
PART ADDED SUCCESSFULLY
LINE NUMBER 003 PART NUMBER 53650
PART ADDED SUCCESSFULLY

('683 patent, Appendix X)

“In the present system, the ordered item is likely not to be found in that file because (as described below) the local computer 40 will normally convert Customer stock numbers to Distributor catalog numbers using the Local Cross Reference Table before the data block is sent (see block 282 in **FIG. 4C**).” ('989 patent (incorporated by reference in patents in suit), Detailed Description of the Invention, 33:9-14 (emphasis added))

“One such system is the Fisher Scientific Requisition and Inventory Management System (‘Fisher RIMS’), described U.S. Pat. No. 5,712,989, filed Apr. 2, 1993 and assigned to Fisher Scientific Company of Pittsburgh, Pa., the disclosure of which is incorporated herein by reference.” ('683 patent, Background of the Invention, 1:13-17)

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item. Type **01** and type **03** items are priced by Distributor's host computer **10** searching host databases **11**, which contain various formulae and tables of Distributor's pricing agreement with the Customer. Host computer **10** also prices any type **04** or type **07** item, if present. These prices were transmitted to local computer **20** along with the location and availability information for the type **01** items. Prices for type **05** and **06** items are maintained in the local computer's **20** own databases **42B** and **42C**.

From Requisition Maintenance data screen **120**, the CSR can accept all lines of the requisition—if all lines show the status "S" for sourced in the "STAT" field of Requisition Maintenance data screen **120**—by pressing the F6 function key. If item errors are found at step **116** in the data transmitted back to local computer **20** from host computer **10** during the sourcing process, then those particular items for which error was found will be returned and displayed by local computer **20** in Requisition Management data screen **110**.

Once a requisition has been inventory sourced and accepted by the CSR, it can be converted to one or more purchase orders, as represented by step **114** in FIG. 3. For example, the requisition represented by the Requisition Item Table **46** of Appendix IX, if accepted without further revision by pressing function key F6 ("ACCEPT"), would result in the generation of the following three purchase orders:

- A. Line **002** would be ordered from on-site distributor owned inventory;
- B. Line **004** would be ordered from on-site customer-owned inventory (a transfer internal to the customer); and
- C. Lines **001** and **003** would be ordered, respectively, from Distributor's "DEL" and "EDC" warehouses.

Of these three purchase orders, Orders A (type "01") and C (type "03") are shared between host computer **10** and local computer **20** (as shown in FIG. 3). Upon execution of Order A, the inventory records on both computers for Distributor-owned JIT inventory are adjusted synchronously. A purchase order is generated by host computer **10** immediately thereafter. Order B (type "06") is executed and stored only on local computer **20**. Upon execution of Order B, the inventory record on local computer **20** is adjusted (the host computer contains no records on Customer-owned JIT inventory or on items ordered by Administrative Purchases). For Administrative Purchases (type **05** items), a purchase order is printed, and mailed or faxed, locally by computer **20** as indicated at step **118** in FIG. 3, or via host computer **10** via EDI (if EDI was selected in the Header of Appendix I and an EDI transfer arrangement existed with vendor).

It is an important feature of the present invention that a requisition may be filled by searching and selecting from a catalog database of items, inventory sourced, and the resulting requisition then divided into one or more purchase orders. This contrasts with known prior art CD-ROM catalog systems in which only a single purchase order to a single supplier is built without reference to inventory records, and in which the information used to create the purchase order is limited to that contained in the product catalog of a single vendor.

Electronic sourcing system **5** also contains the capability to log messages returned from inventory sourcing program or programs **44B** of Fisher RIMS system **40**. Messages will be logged for any of the following reasons: (1) part number changes for line sent to ESCP program **80**; (2) list price from inventory sourcing program **44B** differs from list price returned from ESCP program **80**; (3) vendor name from inventory sourcing program **44B** differs from vendor name

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returned from ESCP program **80**; (4) on a "master or blanket" order, in which local computer **20** tracks the amount of purchases against a blanket or cumulative sum available and/or in which there is limited access to products or limited access to certain users, the part has already been entered on another line; and (5) the maximum number of line items has been reached.

Referring again to FIG. 2, a user is able to view the messages returned by pressing the ALT F11 function keys in REQI program **44A** and its associated Requisition Management screen **110** in Fisher RIMS system **40**. After the ALT F11 keys have been pressed, REQI program **44A** will link to ESMV program **112** via XCTL link **111** for displaying the message log created. ESMV program **112** is a function of Fisher RIMS system **40**. ESMV program **112** allows the user to page through the messages created and then to return to Requisition Management screen **110**. A sample ESMV message screen **81** associated with ESMV program **112** is shown in Appendix X.

The first two messages of the message screen of Appendix X indicate that a part number for line **001**, identified as part number 53610, was successfully added in substitution for a prior part originally entered as part number S100-06 (from the Fisher Scientific catalog). These messages were generated because the originally entered part (S100-06) did not exist in the Fisher catalog, but its corresponding part number S100-06 (that was located by another search in another catalog) did exist in that other catalog. The next message indicates that the vendor for part number 53610 was changed in line **001** from "VN00000001"—meaning that the originally requested vendor (Fisher) was changed. The next two messages indicate that two other part numbers (53620 and 53650) were successfully added as lines **002** and **003**.

In the previous description, an exemplary embodiment has been described in which a Distributor CSR operates Fisher RIMS requisition/purchasing system **40** and IBM TV/2 search program **50** as part of a Just-In-Time activity for a particular customer, Customer. Electronic sourcing system **5** of the present invention may also be used, however, in other requisition and purchasing environments.

In some embodiments, a Customer end user or a Customer purchasing employee operating REQI program **44A** of Fisher RIMS system **40** may also operate TV/2 search program **50**. Operating either from a terminal connected to local computer **20**, or from a separate local computer networked with the CSR's local computer **20**, such a Customer end user can select requisitioned items for inclusion in Requisition Item Table **46** by keystrokes viewing that screen and by searches in TV/2 search program **50** which are transmitted to the Requisition Item Table **46** via interface **60**, as described above. Depending upon his or her authorization level and access code to Fisher RIMS system **40**, the Customer purchasing employee may be able to source the final requisition and/or accept the sourced requisition, as shown in Appendix IX. If, however, the sourced requisition was split into more purchase orders than the Customer purchasing employee might prefer, the intervention of the Distributor CSR could be invoked to revise and re-source the requisition (causing, for example, certain items originally sourced as type **01** products to be sourced for this order as corresponding type **03** products from a common Distributor warehouse with other type **03** products on the requisition). The Customer end user may have authority only to build the Requisition Item Table, but then calls the Distributor CSR or Customer purchasing employee to source and accept the requisition.

As shown in FIG. 1B, the present invention also has application to Distributor's regional customer service loca-

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earlier (see block 302 of FIG. 4D and the related discussion of verifying a line of a requisition containing an 03 code). That use during sourcing will be described first, with the above PYREX Griffin beaker used as an example.

If, during sourcing, the host is validating a catalog number for a purportedly 03 item, it will search a series of files in host database 20. One such file may be unique to the Customer, containing the Customer's stock numbers cross-referenced to a Distributor catalog system. In the present system, the ordered item is likely not to be found in that file because (as described below) the local computer 40 will normally convert Customer stock numbers to Distributor catalog numbers using the Local Cross Reference Table before the data block is sent (see block 282 in FIG. 4C).

The next table host computer 10 searches contains the Distributor catalog numbers. Thus, if the data block contains a line representing a requisition for 02 540K, it will be recognized and host computer 10 will proceed to sourcing 306 and pricing 308. If, however, the data block contains a line representing a requisition for 1000 250 (Corning's part number for the beaker), a match will be found in the vendor cross reference file in host database 20 and that item converted to 02 540K for sourcing 306 and pricing 308. When a data block is transmitted in step 312 back to local computer 40 to update the Requisition Item Table, it will contain 02 540K for the relevant line number and that change will be reflected in the Requisition Management data screen 68 displayed at step 294 or the Requisition Maintenance data screen 108 displayed at step 296.

If a requisition contains a line for B2650250, no match will be found in any of the first three tables of host database 20 searched (i.e., the customer-specific, Distributor or vendor tables). The host computer 10 will then search the competitor cross-reference file and identify B2650250 as a competitor's designation for the same PYREX beaker, convert the line to 02 540K and then proceed to sourcing 306 and pricing 308. It is contemplated, but not required, that a warning message be included in the data block transmitted in step 312 for this line to alert the CSR that a conversion from the competitor's catalog number has been made. The CSR will, in any event, review the product description (PYREX Griffin beaker 250 ml) in the Requisition Management data screen 68 displayed at step 294 or the Requisition Maintenance data screen 108 displayed at step 296 to ensure, for example, that the requisition was not a different supplier's B2650250 or 1000 250, representing an entirely different product. In such case, the CSR can revise the requisition to modify or delete the affected line (and send the modified requisition back to the host computer 10 for sourcing) before acceptance.

When the Cross Reference Maintenance data screen 76 is displayed and a data block is sent to host computer 10 containing a vendor number such as 1000 250 or a competitor's number such as B2650250, the host computer 10 will search various files in host database 20 (as during sourcing, described above) and recognize each as a number corresponding to Distributor catalog number 02 540K. The data block returned to the local computer 40 will then contain a set such as:

VN00002047 1000 250 VN00000001 02 540K

where the two vendor numbers (VN) represent Corning and the Distributor, respectively, or a set such as:

CP00000013 B2650250 VN00000001 02 540K.

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If the local database 50 contains the Customer's equivalent (e.g., BEAKER250 as a stock number), it will add to the Cross-Reference Table lines such as:

5 and:	BEAKER250	VN00002047	1000 250
	BEAKER250	CP00000013	B2650250

which also contain a description, unit and product type as shown in Table XVII.

If the host computer 10 validates the part number in the received data block as a customer-specific stock number, a Distributor catalog number, a vendor part number or a competitor catalog number found in host database 20, a confirmation data block is sent back to local computer 40 containing information such as the above lines; and local computer 40 then updates the Local Cross Reference Table and the display of Cross Maintenance data screen 76. If a line of the received data block contains a part number not recognized, an error data block with an appropriate error code is transmitted to local computer 40, and the display of the Cross Reference Maintenance data screen 76 is updated accordingly.

If the product type is 04, host computer 10 uses its database of valid vendors and vendor part numbers to validate the data in the received data block. If the vendor number and vendor part number are found in host database 20, a confirmation data block is transmitted. The host computer 10 also reviews, at this time, various cross reference files in host database 20 to determine if the part number identified as an 04 item has become a regular Distributor product. If so, that information is added to the confirmation data block and a warning code (503 meaning PRODUCT TYPE CHANGED FROM (04) TO (03)) is included in the confirmation data block. If validation fails, a data block including an appropriate error code or warning code (see, e.g., code 500 in Table XXIV) is transmitted to local computer 40.

If local computer 40 receives a confirmation, it then creates a new entry in the Local Cross Reference Table in local database 50 with the data the CSR has entered.

The CSR may also edit the information for a particular cross reference number using the F4 (Update) key. Upon hitting the F5 key, the same data block transmission and validation of the updated information by host computer 10 will occur as did in Adding a new cross reference number.

Once a cross-reference number has been added to Local Cross Reference Table, the CSR may enter the Customer's cross-reference number in the STOCK NBR field of Requisition Management data screen 68 to requisition a given item. The entered cross-reference number will then be displayed on Requisition Management data screen 68, Requisition Maintenance data screen 108 and in any other data screen or printout which includes the information in the STOCK NBR field. When data blocks for transmission to host computer 10 are created, however, local computer 40 will access the Local Cross Reference Table (which is maintained in a relational database) to substitute the associated Distributor catalog number (or the vendor catalog number with the associated vendor number) for the Customer cross-reference number.

Thus the CSR may create requisitions using the Customer's own catalog numbers (which will likely be referenced in requisition requests received by the CSR) and the Local Cross Reference Table will translate these numbers into Distributor catalog numbers or catalog numbers of other vendors which are recognized by host computer 10.

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ELECTRONIC SOURCING SYSTEM AND METHOD

BACKGROUND OF THE INVENTION

This invention relates to systems and methods for interfacing product information, such as is typically found in vendor catalogs that are provided to customers, and requisition/purchasing systems and methods that may use the results of searches of product information.

There are a number of known requisition/purchasing systems that manage and process requisitions and purchase orders. One such system is the Fisher Scientific Requisition and Inventory Management System ("Fisher RIMS"), described U.S. Pat. No. 5,712,989, filed Apr. 2, 1993 and assigned to Fisher Scientific Company of Pittsburgh, Pa., the disclosure of which is incorporated herein by reference. As its title suggests, Fisher RIMS can also manage inventory. In the Fisher RIMS system, requisition records are created from a real-time interaction between a host computer (generally a mainframe) and a local computer (generally at a customer site), with each computer using data from its own respective database of inventory in conjunction with information entered by a customer service representative operating the local computer. By accessing its respective database, each computer can build and transmit to the other computer communications blocks of data relating to a particular requisition of an item in inventory (or to the management of the inventory itself). The other computer can then use the received data to continue processing of the requisition. Thus, requisition records are created from a real-time interaction between the host and local computers, with each computer using data from its respective database in conjunction with information entered by a customer service representative operating the local computer.

Other requisition/purchasing systems can be grouped broadly into four classes. First, requisition management systems licensed to corporations purchasing for their own use include ORION software (from Medical Management Systems), ENTERPRISE software (from ESI), and NOVA software (from Johnson & Johnson). Second, there exist systems provided by distributors for transmitting orders to them in proprietary formats. Such systems include QUICK-LINK (from Abbott), ASAP system (from Baxter) and LIGHTNING system (from Fisher Scientific). Third, software packages licensed by software developers to customers and/or suppliers enable the transmission of customer purchase orders as EDI purchase orders (in ANSI X.12 format). Examples of such systems include ON-CALL EDI (from TSI International), EDI Express software (from General Electric Information Services) and GETRAN software (from Sterling Software). Fourth, comprehensive business management packages such as REAL WORLD software (from Real World Corporation of Concord, NH) and ASK software (from The ASK Group) contain a purchasing module to create replenishment orders when inventoried items fall below restocking points. The same purchasing module can also be used to place spot orders for products keyed in by the customer's purchasing personnel.

None of these known requisition/purchasing systems (including Fisher RIMS), however, provides a capability for a user readily to search for and locate information about the products that may be requisitioned and ordered in connection with the requisition/purchasing system. They also do not provide the capability for a user to search a database containing two or more vendor catalogs, and then to transfer information about the items selected as a result of such

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searches into a requisition/purchasing system such as Fisher RIMS for building a requisition for the catalog items.

Computer systems that are capable of searching databases containing a product catalog of a particular vendor, for example on CD-ROM, are also known. Such systems can search for user requested information about products and create orders which the user can save, print or, in some cases, facsimile directly to a vendor. The known computer systems for searching vendor catalogs are limited in that only one such vendor catalog is accessible to a user at any given time. They are also limited in that they can only create an order within the particular vendor catalog database. They cannot source items to be requisitioned from a database containing multiple catalogs or interact with a requisition/purchasing system (such as Fisher RIMS) to create a purchase order or orders including the items located from that sourcing operation.

Thus, it would be desirable to provide an electronic sourcing system that provides a means for transferring information between a requisition/purchasing system that may use the results of a search of product information and a means for searching large volumes of product information such as would be included in a vendor product catalog or catalogs.

It would also be desirable to provide such an electronic sourcing system that is capable of searching a database containing at least two vendor product catalogs for product information.

It would further be desirable to provide such an electronic sourcing system that is capable of searching a database of catalog items contained in at least two vendor product catalogs, selecting particular items located, and transferring information about the items selected (for example, a catalog number and a vendor identifier, such as vendor name and/or vendor number) to a requisition/purchasing system for inclusion in a requisition generated by the system.

It would further be desirable to provide an electronic sourcing system that is capable of creating an order list including items located as the result of a catalog database search and transferring that order list of desired catalog items to a requisition/purchasing system for inclusion of the catalog items as entries in a requisition generated by the system.

SUMMARY OF THE INVENTION

In view of the foregoing, it is an object of this invention to provide an electronic sourcing method and system that provides a user with the capability of searching a database containing data (including product/vendor identification, and other product information) relating to items available from at least two vendor product catalogs, and the capability of transferring the product information for desired catalog items obtained as a result of the search to a requisition/purchasing system for use in generating a requisition including entries for the desired catalog items.

It is also an object of this invention to provide an electronic sourcing system that provides a means for bi-directionally transferring information between a requisition/purchasing system that may use the results of a search of such product information, and a means for searching large volumes of product information such as would be included in a vendor product catalog.

It is a further object of this invention to provide an electronic sourcing system capable of creating an order list including desired catalog items located as the result of such a database search, and transferring that order list to a